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MAN AS A MEMBER OF SOCIETY.[1]

PART II.

UP TO THE PRESENT we have seen: (1) primitive man acquiring his first specific and distinctive characters; (2) the family at its origin among the savage tribes and the variations which it subsequently underwent; (3) the manner in which the first societies were constituted, and the principal forms which they afterwards assumed; (4) the two classes of evils with which they are affected, the one external in character—militarism—the other internal in its action—the antagonism of classes and individuals. Our purpose has been twofold: first, to describe human societies in their general characters as we described animal societies; and secondly, to show how the human species after issuing from the state of nature progressively attained the elevated social state in which we see it to-day; in other words, to follow its evolution, which was impossible in the case of animals. We have now to inquire what were the main and collateral influences that have been instrumental in retarding or accelerating the transformations of these societies and in bringing about their differentiations.

1. *The Influence of Races.*—If we look at the present distribution of the various groups of humanity which have been arrested at, or have retrograded to (a fact often difficult to establish), some given one of the stages which we have examined, the influence of the factor of race is incontestable. The black races of Africa and

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[1] Translated from Dr. Topinard's MS. by T. J. McCormack. Part I. appeared in *The Monist* for July, 1897.

of Oceanica, physically the ugliest, yet the most authentic and least crossed of all, are the lowest in civilisation. Most of them are still in the primordial fetishistic period; none of them have given birth to social organisations at all extended; some black hordes have indeed in times past created military monarchies, but their creations were ephemeral and have passed away without leaving any noticeable traces. No ruins or megalithic monuments exist among them giving the least evidence of prior relatively civilised states; the few ruins found in Southwestern Africa are derived undoubtedly from the reddish blacks or crossed Arabs who may be regarded as affined to the primitive Egyptian race. The Australoid race of Huxley, of which we really know but one authentic group, the Australians, are in the same predicament. They have created no institutions, have left no memorials. The characteristic of all the black races is their inaptitude to rise by their own efforts.

Passing to the yellow races, carefully excluding here the retrograded groups, like the Esquimaux and the Fuegians, we find them divided into groups which in favorable circumstances are rarely so low in type as the Botocudos, which sometimes attain an average level, like the Polynesians and generally speaking the Indians of the two Americas and the Dravidians of India, but just as often reach a relatively high level, like the Aztecs of Montezuma, the builders of the temples of Yucatan, the Peruvians of Manco-Capac, and, nearer to us in point of time, the Malays, the Chinese, the Indo-Chinese, and the Japanese. The characteristic of the yellow races is a certain quickness in apprehending the means of satisfying the immediate needs of life and of rendering existence agreeable; but they have little initiative, do not know how to raise themselves to higher planes, and are prone to immobilisation.

The white races remain. These are nowhere discovered in the low stages. They have already a relatively high civilisation in Europe during the prehistoric epochs—namely, during the Reindeer, Palafitte, and Hallstattian periods. They have had their phase of barbarism, like the Franks and the Germans, but one which was

already quite advanced. In the Orient and in Africa, since the first glimmerings of history, their civilisations were astonishingly high, and they had already commenced cultivating the sciences and letters. If I may be permitted to advance a rather bold and perhaps premature opinion, I should reduce the white races to four. The first, brown, small, and dolichocephalic, embraces the Mediterranean races of which I have already spoken; consequently the Greeks and Romans, the Berbers and Egyptians; and further, all the modern and ancient Semites of philology. The second, also brown, but of relatively high stature, embraces the conquerors of the Vedic epoch in India, the Persians, and certain others at which I cannot stop. The third comprehends the brachycephalic Celto-Slavs, concerning the relationship of which to some ancient Asiatic group, of which the Galtchas[1] are at present the nearest known representatives, I reserve for the present my opinion. The fourth is the dolichocephalic race, blond and of high stature, at present predominating in the Northern parts of Europe. Now, if we except the brachycephalic group, which although numerous and prolific played in prehistoric Europe only a subordinate rôle[2], we find it is these white races that founded all the great political states and all the great civilisations of Europe prior and subsequent to the Christian era. The characteristics of the white races are their marked aptitude for developing by their own independent efforts and for assimilating the empirical results of others, their ever increasing need of comfort, their vigorous and comprehensive cere-

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[1] P. Topinard. "On the Celts and Galtchas." In *Bull. Soc. of Anthr. of Paris*. 1878, pp. 117, 247, 383, 391; and 1879, p. 220, etc.

[2] My opinion that the Celto-Slavic race is one of the primitive branches of the yellow races, and made its appearance in the Neolithic epoch, explains the subordinate rôle which it then and subsequently played. Sedentary by habit, following the movements of the populations with which it was in contact, but without notable personal initiative, willing to emigrate but readily returning home again, adaptable to all occupations, industrious, economical, sober and having few needs, it reminds us of the Chinese. The fact that in Europe, situated between the brown and blond races, who are so given to progress, it has remained stationary, like the Chinese, is deserving of remark. Examples of this race are, the Savoyards and the Auvergnats which I know best.

bral activity, and their spirit of initiative, which the expression "go ahead" of one of them so aptly expresses.

It cannot, therefore, be doubted for an instant that race has had a considerable influence upon the development of human societies. All races, in our opinion, if favored by circumstances, may progress, particularly when they are in contact with stronger races. But they have not all the same aptitude, and many which we have never known and which even anatomical anthropology cannot disclose, must have utterly vanished. There is a chance here of writing an exceedingly interesting chapter on the psychological characters of races from this point of view—characters which are just as trustworthy for distinguishing between them as are physical characters.

2. *The Influence of Language.*—At the beginning of this century, when comparative philology arose, an epoch of infatuation set in, which reached its maximum when Balbi in 1826, in an effort to moderate its pretensions, published his *Introduction à l'atlas ethnographique du globe.* Up to 1869, or thereabouts, and despite the brilliant discussion which took place in the Anthropological Society of Paris, writers invariably confounded peoples with races and languages with races. These times are gone by. We are today in the right path. We know that languages perish, decline, and are superseded in part or in whole, that their boundaries advance or recede without reference to race, as circumstances and frequently diplomatists determine. Philologically there are Aryans, but there are no Aryans by race. There is a French race from the point of view of language, there is none from the point of view of anthropology. But if language has no relation to race, it has to peoples or nationalities. A common language strengthens the bonds between the different fractions of the same people, encouraging the exchange of ideas and the conduct of business. It assists in the mixture, crossing, and fusion of races, as does everything that tends to bring individuals closer together, and in lessening misunderstandings and causes of conflict, just as the same religion, similar customs, and like interests do. Such is the great influence that languages have exercised on social development. Two indi-

viduals who understand each other are nearer to agreeing and fraternising, whether they are of different blood or not. There are, it is true, federations of states, both large and small, maintained between groups differing in language and religion, but then there are mitigating circumstances and superior advantages involved which offset the resulting drawbacks. Moreover, these unions are often only superficially such; the integrant states form national sub-individualities, rivalry between which is always to be feared. In short, unity of language between remote or adjacent groups of men proves but one thing, that at some period they have lived together during a long interval of time. Nations are the products of the events of history and of politics.[1]

3. *The Influence of Population.*—I can touch only briefly upon this factor, although it is the most powerful of all evolution. I have already shown how by rendering existence more and more difficult the increase of population forced man to pass from the hunter and fisher stages to the pastoral and agricultural stages, and from the latter to the commercial and industrial stages. I further indicated how it led to the antagonism of classes and individuals. The increase of population, it is true, is a complex phenomenon. According to the celebrated theory of Malthus, propounded in 1798, in every hundred years the alimentary resources of a country increase in arithmetical proportion only, whilst the population increases in geometrical. But the facts have contradicted him, the resources have increased proportionately more, there has been overproduction and resulting surplus, whilst the rhythm of natality has diminished, because the enlightened and far-sighted classes voluntarily limit the number of their children. If to this cause, which in the present civilisation seems to be on the increase, there be added the lessened disposition to have children evinced by women struggling for emancipation, the question arises, What will this ultimately lead to?

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[1] P. Topinard, *Le principe des nationalités; Revue critique à propos de la péninsule des Balkans*, in *La Revue d'Anthropologie*, p. 124, 1886. The same, *La race en anthropologie*, in the *Comptes rendus du congrès internationa. d'anthropologie et de préhistorique de 1892 à Moscou.*

4. *Influence of Topographical, Climatic, and Alimentary Conditions.*—Although man is a cosmopolitan animal who adapts himself to all conditions, the influence of the factors here in question is indisputable, though it has rather the effect of differentiating than of accelerating or retarding social evolution. It should certainly not be overlooked. Just as individuals vary and are more or less favored in the aptitudes they exhibit, so the countries of the globe present conditions of existence which are widely different for man. One country is naturally defended, as an island, a peninsula, or high valley; it will be protected by a desert or a chain of mountains. Another, on the contrary, will be exposed to all incursions. One country will be rich in fauna and flora, in mines of coal and metals, in rivers and seaports. Another will be arid, sandy, rainless, and exposed to all the winds of heaven, or swampy and unhealthy, too hot or too cold.

Necessarily the stimulants to action will vary in all these different cases as to number, power, and quality, and will give rise to widely different impulses. Progress as a rule is proportionate to the difficulties encountered, providing the latter do not exceed a certain limit and do not bring in their train discouragement and resignation; in some circumstances reaction is impossible. The more a country is the object of rival desires, the more are the probabilities of its giving rise to advanced forms of society. Such are the valleys of the Nile, of the Tigris, and of the Euphrates, of the Yellow and Blue Rivers in China, of the Indus and the Ganges. Western Europe has always been a bone of contention with the so-called barbarous nations, and has given rise to the highest civilisations. Conversely, the least envied countries, like the deserts of Sahara and Kalahari, the steppes of Central Asia and Siberia, lofty plateaus between two chains of rocky mountains, are the habitats of peoples who have advanced only slowly in civilisation. Generally speaking, the northern peoples, who are subjected to an invigorating atmosphere, are more active than southern peoples, who are enervated by heat and inclined to indolence, and yet it is among the latter that the Chaldean, Persian, and Assyrian empires, Carthage, Greece, and Rome arose. Mountains afford a refuge for

quiet, sedentary, and industrious peoples, and fertile plains for pastoral nations, etc.

5. *The Influence of Adjacency.*—This factor is considerable, although the works never dwell upon it. A society cannot be the same if its neighboring society is warlike and turbulent, or peaceable and sedentary; or if it is enlightened, religious, devoted to the arts, and possessing good laws, or ignorant, sceptical, uncultivated, and badly governed. Emulation and example are factors of the first order. We look about us and acquire the manners, customs, faults, and excellences of our neighbors, just as we acquire their language, religion, their methods in science and philosophy, their fashions in literature, and their ideas of morality. The imitation which M. Tarde has emphasised is more frequently a psychical contagion than a voluntary act. It is operative outwardly among nations as well as within them between different strata of society. The enticement of fashion may be observed in all fields of human conduct. Habits, like ideas, are communicated. Chiefs, legislatures, professions yield to imitation as much as individuals.

6. *Influence of Circumstances.*—By this word, which Lamarck used to designate the sum-total of all the causes capable of exercising an influence upon existence and of producing changes therein, we understand here simply such determinative facts as occur unlooked for, which in the normal course would not have come to pass, and which are the origin of a new impulse imparted to a society that has become immobilised or is involved in a different course of evolution—an impulse which may give rise to both good and bad results. The circumstance may be violent or feeble in character, or even insignificant. Of the first class and in the physical order, we have an example in the eruption of the sea, say the Zuyderzee, over a vast surface occupied by a peaceful people, who are thus forced to become warlike and to go in quest of another habitable country, where their habits are necessarily completely altered. Another example of the same class is an invasion of barbarians, who, after putting everything to the fire and the sword, draw off, leaving behind them a people who in one case never recovering from their exhaustion will retrograde, or, in the other,

shaking off their lethargy, will rise again and enter upon a career of prosperity which otherwise they would never have pursued. As to feeble, inconspicuous circumstances, who has not, at some time or other, observed their puissant efficacy? Events most frequently are the resultant of an *ensemble* of dispositions and circumstances. Ten or twenty will be combined. One of them, perhaps the least effective, will play the part of the drop of water that causes a vessel to overflow and so will be the determining cause. If the drop of water had not come at the right moment, the other conditions would have been dissipated and the event delayed or deferred forever. Circumstances, whether potent or feeble, belong to the domain of chance so-called, and are a factor with which we must reckon in evolution and the directions which it takes.

7. *Influence of Individuals.*—This factor is for man what the preceding one is for things. Let us suppose that in the circumstances presumed above where everything has united to produce a certain effect, the right man is not present; either the effect will not be forthcoming, or it will miscarry. Conversely, suppose the situation is not yet ripe, but that some one of that class of men who are called geniuses and whose interposition people regard as providential, arises; then the event can occur and bring in its train decisive transformations. Truly, men amount to little when they are not the expression of their time, when they do not come at their psychological hour. Many, and some of the most brilliant even, have thus passed away without their fellow creatures having derived the least advantage from their existence. Such are the majority of military heroes whom history places in the first rank, who fill the world with their reverberant personalities and leave nothing behind them but smoke. But by the side of these ill-timed geniuses whose efforts have been bootless, how many there are whom history or tradition mentions, and others whom the world has forgotten, that at some time, by some little thing, some new instrument, some new process, some law, or simply some example, merit being inscribed among the prime causes that determine evolution. This species of men, these shapers of progress, seem to be almost entirely wanting among the black races; they are scarce among the yellow

races; they are common among the white races. The stages of evolution may be represented by a net, the threaded pathways of which are variously tied together. At the points of crossing are bright, salient knots; the latter are the individuals that mark the changes of the pathways. Whilst in animals progress is effected by circumstances taken in the broad sense of Lamarck, in man it is principally effected by individuals. The *élite* individuals are the wealth of a nation.

8. *The Influence of Needs, as Infinitely Differentiated and Multiplied in All Directions.*—This is the last and most important, though an indirect, factor. Lamarck made it the second link of his chain which leads to adaptation. Outward circumstances, he said, engender needs, the latter new habits, the latter excess or deficiency of use of organs, which last causes adaptation.

The doctrine of Lamarck, which is diametrically opposed to that of Weismann, having regained to-day the position which rightly belongs to it, particularly in the United States, where it has been ably defended among others by the late Professor Cope, we shall give a *résumé* of the mechanism of the needs which play so prominent a part in it. Let us take the following example. An animal is placed in a new environment where in order to live it must breathe harder. The quantity of air being insufficient, a painful sensation is produced in the lungs, which reverberates throughout the entire organism. This is the need, that is to say, a solicitation at once local and general, to breathe more energetically. The animal responds to it by powerfully contracting its respiratory muscles, the lungs dilate more than before, more air enters, the circulation is accelerated, the organism experience the consciousness of well being, it is satisfied. The same solicitation is repeated, the same response is made, the animal acquires the habit of the act, the habit being repeated from generation to generation is transmitted and fixed and becomes an instinct, that is to say, a simple reflex action in which the will no longer intervenes. In consequence, the respiratory muscles have increased in volume, the fibres that best conform to the respiration demanded are hypertrophied while those which do not so lend themselves are atrophied. The

pulmonary tissue, now more active, has augmented, its areoles have multiplied, its vascular and nervous webs have become enriched. The adaptation of the new condition has been accomplished.

In this case the initial solicitation came from without. In other cases it comes from within; for example, when new kinds of food are introduced into the mouth or stomach. The masticatory muscles, the teeth, perhaps the jaws and salivary glands, and even the stomach itself are forced to adapt themselves to the new function which is imposed upon them. But the following is a more general case. By the very fact that an organ is doing work, the blood is conveyed to it in increased abundance, enhances its sum-total of life, and so it becomes of itself a stimulus to further work, and consequently to improved adaptation to the special kind of work in hand. Let the stimulus which has engendered the activity be continued, and the activity thus excited will by virtue of the momentum acquired go on increasing, perfecting, and differentiating itself, according to the character of the operation and to the parts which have been its principal seat.

Such, more than any other organ, is the brain. Highly vascular, and in richly endowed individuals eminently subject to stimulating impressions, it carries within it the principle of its own activity, its own improvement, and its own differentiation according to the character of the faculties which the individual sets in play, according to the impressions which he receives, the impressions which he accumulates, and the ideas which he elaborates. Few individuals are free to withdraw from its influence, or not to respond in the presence of excitations which have come from without or of incitations which have come from within. There are, it is true, races and groups of men who in all circumstances evince more or less *sang froid*, if I may be permitted the expression; individuals without resiliency and of apathetic temperament, acting only from habit and giving play to their general reflexes in which the will enters only from compulsion, as in walking and in certain spontaneous acts which are performed without reflexion. In such persons, cerebral action may become immobilised, may fall off, and

even retrograde. But at their side are those who possess in abundant measure that which is the characteristic of man, namely, a powerful cerebral activity, who are sensitive, lively, and militant. The latter are alert to impressions, direct their attention to wherever it is solicited, think, and never leave their brain at rest. In the latter, the potency of the cerebral organ increases, intellectual needs are multiplied and engender progress, both to the profit of the individuals themselves and to that of the society of which they are part.

This remarkable property of the brain, which in some measure is characteristic of all organs, of bearing within itself the stimulus to its own activity, is only a particular application of the broad and general biological law that every function, be it organic, sensory, or intellectual, tends to increase, if left to itself; or that action engenders action, sentiments sentiments, secretions secretions, hypergenesis hypergenesis, and, generally, that everything which has life has the need of living more, of living to the full. This is the sum and substance of that law of proliferation and of expansion which we cited as the first biological factor of evolution, on page 26 of *The Monist*, for 1895.

Needs in animals as in man are of two kinds: physical or organic, and psychic or intellectual; the latter attaining in man a development unknown in animals. Physical needs have reference to the conservation of the species or to the conservation of individuals. Breathing, eating, shelter from the elements, covering oneself with mud or dust as a protection against insects, running from the sheer love of exercising the muscles, are examples of these needs. Associating with one's fellows for amusement and mutual happiness, the desire to dominate, to protect, sometimes to sacrifice oneself for them, the wish to be approved of and admired, and the longing to excel in the chase or in racing, are examples of the psychical order.

Needs and their consequences embrace the same elements in man and in animals: solicitation to an act and the desire to respond to it, the pleasure experienced, of which the memory is preserved, which alone forms an inducement to repeat the act, and

satiety. In the animal, the surplus or deficiency of satisfaction obtained may bring about a differentiation of needs. The animal will feel, according to circumstances, the need of this or that kind of food, of this or that shelter, of this or that pleasure; he will be induced in various ways to satisfy his vanity and his need of society. In man, in whom the psychical element strengthens the organic need, and who discriminates between sensations and so arrives at the most varied distinctions, the physical needs are rapidly differentiated.

Thus, at the beginning man rent and devoured his prey raw. Chance attempts demonstrated to him that cooked flesh gave more satisfaction. He began over again, acquired a new habit, and thenceforth the use of cooked meat became a need, which assumed various forms and led later to the invention of the art of cooking. At the beginning he ate with his fingers and drank directly from the brook. One day he invented utensils and pottery. Eating and drinking from vessels became a necessity. Later a table was wanting, and a seat for making himself more comfortable at his repasts. Then he longed for decorated vessels and all sorts of superfluities, —all habits empirically aquired and ultimately becoming needs which he had to satisfy. So also at first he went about naked. He began by using leaves, then skins, and finally sumptuous garments. And so it is in all things.

But with the multiplicity of needs or of demands life became more complex and more difficult. It became necessary to work more and to seek other resources. Three hours a day were sufficient to satisfy the original needs of man; ten, it may be, are necessary at present. Hunting was followed by barter, the raising of cattle, agriculture, and industry. In those days one constructed one's own dwelling. It is now necessary to run to the carpenter, the glazier, and the locksmith. To the struggle for life has been added the struggle for appearance,—the desire of possessing a more beautiful residence, larger grounds, distinguished social position, and political power,—all desires which men cannot resist, which form the greatest stimulants to individual activity, and which

constitute the agents of progress. This leads us to psychical needs.

9. *Psychical Needs.*—It goes without saying that in the preceding instances the brain is not indifferent, although it plays only a secondary rôle, being prompted thereto by external excitations. In psychical needs the case is different; here the action of the brain is primitive; the point of departure, the work and pleasure involved, are inherent in the cerebral organ itself, and are independent of the acts which may fortuitously result therefrom. These needs are of two kinds: (1) *sensitive* or *emotional*, that is to say, connected with the sensibility proper of the brain, with that sixth interior sense which gives us cognisance of what is going forward in the cerebral organ and which constitutes the sensorium; and (2) intellectual, that is to say, connected with the internal work which is going on, with the exercise itself of the faculties. Examples of the first kind are the need of belief, of worship and prayer, the need of loving and of being loved, the need of approbation and of admiration, whence the need of engaging in combat and of gaining glory, of leaving behind oneself a name. But these last are already of a mixed character closely related to the needs of the preceding paragraph. Examples of the second kind are the needs of knowledge, research, discovery, explanation, the need of inventing, of creating, of imagining, of setting oneself an ideal. They are in general more highly developed according as the action of the brain is more predominant, be it in the evolutionary scale of the human groups themselves or in the scale of individual variations within the same group. Here we may seek with most reason the characteristics of what Isodore Geoffroy St. Hilaire has called the human kingdom, and the personal dominant note of each individual.

Nevertheless, we find the germs of these needs here and there in animals. The dog, for example, who, motionless and intent, lovingly regards his master and worships him as a divinity and, when that master slays him, dies with tears in his eyes, is obeying a psychical need and finds its sole recompense in himself. In the same way, the bird or mammal who soars or runs with his fellows

of the same sex, shares their existence, and abandons himself to the joy of the occasion, is moved by none other than a cerebral need which purely internal pleasure consecrates. The ass or the horse who makes himself the chief of a troop for tyrannising over or protecting those feebler than himself, has also no other motive than a cerebral need. The fighting cock matched in a pit against another whom he has no reason for combating, and where there is even no female at stake, is not moved by considerations of advantage; his nervous centres simply command him, he obeys, his reward is the glory he wins—a psychical sentiment. The monkey, finally, who turns a screw to and fro in order to find out how it enters a hole, or twists a key in a lock in order to open a door, is not concerned about the advantage which he may derive therefrom; to have succeeded in finding out what he wants is his whole joy.

We cannot stop at all the complex types which psychical needs exhibit in man. We shall abide by those which best lead to the object which we have set ourselves, *videlicet*, to the active types which on the one hand have created the sciences, and on the other the arts, letters and philosophy, and to the passive type which has engendered sociability.

Taking as our criterion the way people have of looking at the world there are two kinds of cerebral organisation. External objects at rest or in motion are made known to us by our senses, which furnish us with images comparable to instantaneous photographs. These are centralised by the sensorium and stored up in its library. They are the materials upon which the intellectual faculties then exert their activity and from which they draw generalisations and relations, that is to say, ideas of the first, second, third, fourth, or fifth order, some having resemblance to the original images proper, others being more and more remote from the latter and still others being veritable creations, often having no palpable bonds with the ideas from which they sprang. Now certain minds can never lose from sight the photographic images of resting or moving objects, which images are the equivalents of the things of nature; they never omit comparing them with one another, always take account of the additions and modifications which

their individual sensibility imparts to them, and appraise and judge their reciprocal relations as if they were spectators observing them from above. They are the objective type. Others, on the other hand, suffer themselves to be carried away by their sensibility, by the labor to which they subject these images, and by their imagination. They confound with the objective images the new images which they have conceived and the ideals which they have deduced from them ; they replace them by intuitions ; they even go so far as to say that these images are the appearances and that the conceptions are the sole realities. They are the subjective type. The first have given rise to the sciences, the second to the arts and letters, and to philosophy,—the two opposed poles of human thought.

10. *The Sciences.*—These are the outcome of the need of knowing and of explaining, restricted by certain requirements of method, of which the following are the principal: to consider things objectively only; to begin with simple things; to hold steadfastly to the aim of one's research without anticipating the solution of the problem; to proceed from the known to the unknown; to stop when the facts forsake us, and then take refuge in agnosticism ; not to forget the precept *qui va piano va sano;* to begin the edifice at the base. The first thing is to observe the phenomenon or object in the rough; the first operation consists in comparing it with a sufficient number of other phenomena or analogous objects, and to establish their differences or resemblances. The first result is one or several relations obtained by induction. Classification, more and more general views, analysis and experiment as means of control, and statistics, are the more advanced procedures. The end is the knowledge of the real world.

For a long time man was an observer only. He was led by empiricism, and not by methodical reasoning, to the moulding and baking of his first earthenware, to the mingling of tin and copper to form bronze, to the employing of bows and arrows, boomerangs, levers, wedges, rollers, etc. The first science that rises above the horizon of our knowledge is astronomy, which already presupposed considerable mental development. The honor of having cultivated it belongs to the Chaldean and Egyptian priests, and perhaps also

to the Chinese. Although counting does not make an early appearance among savages, yet the science of numbers followed; being unquestionably derived from the preceding. Then medicine succeeded with Hippocrates, a good observer but a weak theorist, natural history with Aristotle, who, in his *History of Animals*, advanced this science to a high pitch, human anatomy with Erasistratus and Herophilus, and physics with Archimedes. The start had been made. But with Christianity and the invasion of the barbarians, abysmal night set in. Faith, which is not favorable to the search for truth, diverted men's minds in other directions. In the sixteenth century, the sun arose again. The sciences resumed their career, began a majestic development, and have now reached the lofty altitude of the nineteenth century, crowned by its Darwins, Pasteurs, and Edisons, the preludes of new conquests, of which the limits cannot be foreseen.

11. *Arts and Letters.*—The second kind of cerebral activity, which bears within itself its own stimulants and its own reward, has, in a far broader sense than the former, its roots in the animal world, where it is manifested by the distinguishing of certain sensations that have already attained a considerable degree of delicacy. The birds listen morning and evening to one another's songs, respond, and render genuine concerts. Serpents may be charmed by the flute, the horse is roused by the sound of the trumpet, all have heard of the dog who, whenever its mistress played on the piano, ran to her door and listened long and absorbedly. Monkeys strike the trees in rhythmical cadence with their sticks. It is certain that some animals are moved by a bright and joyous morning, by a glorious sunrise when nature is in holiday attire, and it is not impossible that these moods have given rise in man to the sense of the beautiful.

In man the artistic sense is a complex and composite formation, in which the following factors enter: (1) the pleasure afforded by the senses, especially by sight and hearing, which leaves behind it a distinct and lively impression; (2) a quite peculiar subtlety of certain aspects of the sixth or internal sense, rising to what has been denominated the æsthetic sense; (3) the faculty of invention

or creation, augmented in certain directions by a more or less lively imagination; (4) the need, frequently but not always expressed, of reproducing the works which one has conceived or the ideal which one seeks to approach, in music, painting, sculpture, speech, or writing.

As far back as our archæological knowledge permits us to go, and as deep down as we descend in the scale of existing savages, we discover some taste for artistic things. We have the drawings of the Troglodytes of the Vézère, of the Esquimaux and the Australians. We have seen with our own eyes a Bushman girl of fifteen or thereabouts drawing designs which were remarkably accurate. Songs and dances accompanied by music are a pleasure which the savages of all countries affect. When the Esquimaux have a quarrel to settle they challenge each other to a duel in which each struggles to outdo the other in song and poetry. The literary collections of the redskins are being daily enriched.

If we pass on from this point to the first civilisations of history or of proto-history, architecture, decorative art, and even literature appear in Assyria and Egypt at a stage of development which is remarkable. Towards the year 1000 B. C., at the dawn of Grecian civilisation, the poems of Hesiod and Homer appeared. And in the age of Pericles we have an architecture, a decorative art, and a sculptor Phidias, that have never yet been surpassed.

All this justifies us, without going further, in concluding that the various factors which give birth to arts and letters, attained in man a high development far earlier than those which gave rise to science.

12. *Philosophy.*—The third species of cerebral activity, that has sprung from the inherent need of this organ to labor and finds in itself the sole reward of its labor, is philosophy. Its place would be between the two preceding. Like the first, it answers to the need of knowing and explaining; like the second, it proceeds from subjective sensibility, from the faculty of inventing, of creating, of imagining, and views its conceptions as absolute realities. Let us follow its development. Animals, as we have seen, in the presence of phenomena which they do not understand, retire confounded.

Savage man does the same. But he at least hazards the attempt of an explanation by investing the objects or phenomena in question with life and sentiments similar to his own. Later, this same savage, discovering or believing to discover in himself a double being, the one corporeal and the other spiritual, transfers the new notions regarding himself to objects without himself, to stones, plants, animals, or stars. This is the second period—animism. Here the savage is simply superstitious. Of these objects, or of their doubles, the spirits, he makes fetishes. To worship the products of imagination is superstition. Religions, at first more or less elementary, with their founders and priests, do not appear until later.

For a long time the sorcerer, that is to say, a man less credulous than the rest, and adroit in the sense of knowing how to reap personal advantage from the beliefs of his fellows, stood alone in his clan. Sorcerer and medicine man at once, he distributed amulets, drove out spirits from the bodies of the deceased, and caused the rains to fall. Consulted in the councils and on the departure of expeditions, he added to his prophetic functions of foretelling events, the performance of sacrifices designed to conjure evil spirits. With the increase of population, the number of sorcerers increased. The different sorcerers were led to combine, to act in concert, to consolidate their interests, and to regulate their rights and beliefs, which were the foundations of their power. Thus the sacerdotal caste arose, at times recruiting itself from the outside and at times hereditary. More intelligent than the others, more disposed to reflect, the priests were naturally inclined to seek more satisfactory explanations for the phenomena of nature, to distinguish general causes from particular causes, to reduce the number of the spirits, to champion the most important of these, and even to symbolise many of them. The cult of heroes, of personages in the tribe who had rendered it valuable services, and of ancestors, was mingled with the preceding beliefs. Having to speak to simple people, for whom it was necessary to materialise things, they were obliged to recast their ideas and to expound them by the help of fables and myths, which soon essayed to explain in a tangible form the origin of things, the existing phenomena of nature, and

often to guide the conduct of men. These were the first attempts of philosophy, already as utilitarian as they were mystical.

Animism was for a long time nothing but crude naturalism, intentionally fostered perhaps in the popular classes. Following the method of survivals, we have found it existing everywhere more or less. It was general in India at the time of the Vedas, throughout all ancient Egypt, and in China before Confucius. It frequently competed with the family cult of ancestors which existed by its side. Gradually, however, the number of the spirits diminished; some which possessed more general significance displaced the others. Such were the genii of light and darkness, the genii of good and evil, who were opposed in combat; and also the genii of the heavens, the sea, Hades, war, and the harvest, known among the Greeks by the name of Jupiter, Neptune, Pluto, Mars, and Ceres. There were thus constituted hierarchies of divinities, Olympi of gods and demi-gods, the anthropomorphic adventures of which have been recounted and embellished by the poets. This was the phase of refined polytheism, naturalistic at its base, sometimes symbolical in its culminations, part for the people and part for the initiated.

Religions consecrated a multitude of usages and ceremonies from which the sacerdotal class lived and which greatly augmented its power; but they also exerted a strong political influence. At times they lodged the entire governmental power in the priests; it is known that the Egyptian monarchy began some five thousand years before our era by Menes having overthrown the sacerdotal domination in Egypt and subsequently having established himself at Memphis. Sometimes they founded a collateral monarchic or oligarchic power, and suffered the laws to be promulgated as ordinances or revelations of the Gods. At other times they amalgamated scattered tribes and made of them a nationality. Again, they led up to genuine moral codes such as those of Brahma and Buddha in India, and Confucius in China..

The philosophical idea and the utilitarian idea were associated in the last instance. In China, without ever a word of God or of the immortal soul, it was held that the law of heaven was perfec-

tion and the law of earth the perfectioning of self; that duty is an internal obligation to which every one should bow, the object of which is fraternity and the basis the family organisation, fostered by the worship of ancestors, of which we have already spoken.[1]

Subsequently to the Vedas in India the two ideas led to a naturalistic pantheism and to a system of morality which was derived therefrom as follows. The trinity at the summit of the edifice comprised three principles: The first, the creator, or Brahma; the second, the destroyer, or Siva; the third, the conserver, or Vishnu. The immortal souls passed, for a cycle of years more or less prolonged, from one body to another, higher or lower in the natural scale, according to the conduct of the individual. The end and the final recompense of those who have attained by their conduct the last stage of wisdom or of good is the extinction of all evil by submersion in the great All. When one of these Brahman preachers was asked what the Supreme God was, he replied, Of what use is it to cudgel one's brains about a thing one can never know. It remains to be known whether this doctrine led the Hindus to the conduct which yields the greatest amount of happiness.

The utilitarian idea appears to have dominated among the Phœnician and Canaanite peoples. It gave rise to the doctrine of a personal national god who had created man and the people whom he had chosen and whose destinies he directed. With them he had made a covenant. He exacted from them blind and exclusive worship and obedience to the laws which he promulgated. In return he protected them, reserving the right of terrestrial punishment. Pantheism and the immortality of the soul are, according to M. Fouillée, the general tendency of the Aryan peoples as monotheism without the immortality of the soul is the characteristic of the Occidental Semitic peoples. Both seek the sanction of moral conduct in a power beyond the individual, whilst the Chinese place it in the

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[1] It may be that the official religion of China is the apparent religion only, and that family religion is the real motive power, that has the most influence upon conduct. This is a question that is still to be looked into. See, among others, J. I. Lanessan, *La Morale des philosophes Chinois. Extraits des livres classiques de la Chine et de l'Annam.—Bibl. Scientif. Contemp.* Paris, 1896.

individual himself. The Egyptians are related to the Hindus by their belief in metempsychosis or in the transmigration of souls from animal to animal, but they have set a limit to the transmigration. The cycle has been fixed at three thousand years. A posthumous judgment is then pronounced by forty-two judges over whom Osiris presides. This conception of a single judgment after death, if not of a second, when the cycle has run out, passed through these peoples to the polytheism of Greece and Rome.

In Greece it was among the philosophers or thinkers by profession and not among the priests, that the fetishistic idea and then the generalised animistic idea (subsequently simplified and sometimes symbolised) reached its highest and most spiritual form. It became here the idea of unity pervading the All, but of a unity which was ineffable and undemonstrable, which was conceived as universal and eternal, and for which the name of God was reserved. This is idealistic pantheism.

Greek philosophy is the most striking known expression of the cerebral need above mentioned, which impels man to exercise his intellectual faculties from the sheer pleasure of the exercise. It is the most astonishing proof of the progress accomplished by reason since its modest origin in primitive man. It is proof of the unlimited confidence which man subsequently placed in himself and of the immeasurable sweep which his faculty of imagination took. Without any other empirical basis than the common observations which every one makes, Greek philosophy rose audaciously to the loftiest and boldest conceptions, not conceptions crowning an intellectual edifice, but conceptions which dominate it in imaginary realms of space. Its fundamental idea was this: nature is admirably co-ordinated in all its parts, things are bound together by a necessary connexion and have both efficient and final causes. Through mathematics the only science then advanced, that with which all minds were infatuated, they conceived and demonstrated the harmony of forms. By reason man similarly conceives and comprehends the order which reigns in all things.

At the beginning, Greek philosophy sought the principle of the world in water, air, and fire, then in motion, atoms, numbers, at-

tractions, and repulsions, and finally, in a divine and universal unity.[1]

For Plato, the things which the senses show us are appearances only, shadows (the relative). The true light is that of reason, the only realities (the absolute) are what reason conceives. Individuals die, their sensations are extinguished with them. That which reason has revealed is the truth that persists and is eternal. Ideas take precedence over sensations. God is the highest idea, the last, the supreme idea, the quintessence of the correct, the good, and the beautiful. Next comes reason which has conceived him—intelligence. Finally comes the third general idea, the world, the universal soul from which all particular souls emanate. The nature of man is two-fold. One is the spiritual, that is, the immortal part, the soul; the other is the corporeal part. The first commands the second and should make every effort to approach nearer to the universal soul of which it is an emanation and consequently to God, the supreme idea, the sovereign good. The virtuous man, the sage, is he whose conduct conforms to these principles. He is a destiny to himself. As a sanction, Plato admits the posthumous judgment of the soul in the manner of the Egyptians and of Greek polytheism as also the cycle (*Republic*).

Aristotle belongs apart. He is at once scholar and philosopher, he observes nature. He is the founder of natural history, of anthropology, of political science, and of political economy. According to Graef he is also the founder of positive philosophy because he was the first to introduce positive facts into philosophy. In writing his *Politics* he is said to have gathered for the purpose one hundred and fifty different constitutions. In many points he is in accord with Plato, but not in all. For him the attributes of bodies cannot be separated from these bodies. Abstract general ideas are nothing but words and names. The universal good, the universal absolute, do not exist; the individual soul is not immortal for without memory all personal consciousness is impossible;

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[1] Paul Janet. *Histoire de la Philosophie, les problèmes et les écoles.* Paris, 1894.

every thing, every plant, every animal has its end—amelioration in the sense of its relative welfare. The goal of man is self-perfection with a view to happiness. Nature herself impels him to this end. Virtue is the appropriation of acts to this end. There are three kinds of virtues: animal, moral, and intellectual. Moral virtues consist in preserving a just mean. They are habits which have sprung from the repetition of acts by education.[1]

But by the side of the theorist in these two philosophers we have also the practical man, who knows how to change his point of view and to place himself on a level with his times. By the side of the above-mentioned transcendental works we have plans for social organisation expounded by Plato in his *Republic* and his *Laws* and by Aristotle in his *Politics* and *Morals*. The ideas which here reign supreme are the omnipotence of the State, public utility, and the natural inequality of man. At this epoch in Athens the mass of the population, as we have said, were slaves. A large number were aliens who had taken up their domicile there; a small body only, 9/100, were citizens, distributed into higher classes (priests, magistrates, and warriors) and into certain lower classes. Now the views of Plato and Aristotle had reference only to the citizens of the higher classes. Aristotle in his *Politics* says that the true citizens are only those who are neither farmers nor tradesmen, nor handicraftsmen,[2] and that some people were born to command, others to obey. The following is the general rule of society for Plato: each person should strengthen himself in his prerogatives, his rank, his profession, and not mingle in affairs which do not concern him. In the warrior class he demanded community of women and children and *selection* by the magistrates of the best producers, as in the case of selection for cattle, so as to obtain as subjects the strongest and most beautiful, that is to say, those who would be most useful to the State.[3] The public welfare is the first social

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[1] *The Nicomachean Ethics of Aristotle.* Transl. by Peters. London, 1895. *La morale à Nicomaque d'Aristote.* Trad. par L. Cassan. Paris, 1886.

[2] *Aristote. La Politique.* Trad. de Thurot. Lib. IV. Ch. VIII. Art. 3. Paris.

[3] *Platon. L'Etat ou le Republique.* Trad. de Bastien. Lib. V. Ch. II. Art. 1 et 2. Paris.

principle, the only one indeed; the independence of individuals is subordinate to it. For Plato, as for Aristotle, the education that makes men is one of the first functions of the State. Both sacrifice the individual to the family and also to property.

Other Greek philosophers also busied themselves with practical morals. Socrates, contends Boutroux, is the real founder of the science of morals. Prior to him the sophists had in all laws distinguished the elements derived from nature and those derived from custom. Socrates distinguished unwritten laws which were universally admitted and had been instituted by the gods, and written or human laws. Happiness, utility, and good were one. The interest of each one conforms to the public weal. Socrates defends woman and the slave.

For the Stoics morals is the art of living. We must contemn the physical needs which do not depend on us and esteem only the moral needs of which we are masters. Happiness is within us in the exercise of our faculties, and for what does not concern us, in indifference. For the Epicureans, to follow nature and to seek pleasures, preferentially those of the mind, is the best rule. The doctrine of the first, although tinged with pride is a beautiful one, but like that of the second, led its later disciples at Rome to the extinction of all individual energy and to the consecration of egoism.

In sum, the Greek philosophers founded the intuitive method, the yoke of which philosophy has never yet been able to throw off. They opened up, in various directions, some spiritualistic and others materialistic, the paths which we are still following. They were the first consciously to attack the problems of human conduct, both individual and social; and yet in the general run they were dialecticians, sophists, and intellectual gymnasts only. But such as they were, they founded free inquiry, disintegrated the national polytheistic beliefs, and prepared the way for the revolution which was on the verge of accomplishment.

Society, which soon was epitomised in the Roman world, was just attaining in fact one of those critical phases in the history of evolution where all the circumstances coincide that are calculated to bring on transformations and provoke new adaptations. The

evils which militarism had engendered had reached their acme, morals had been perverted to the last degree, scepticism was universal and the disorganisation was complete.

It was then that in an unknown corner of Judea on the banks of a lake the glad tidings burst forth of a coming regeneration, and a voice was heard pleading the cause of the feeble, the humble and the oppressed, and saying: "Love ye one another." The doctrine, at first local and inculcated by a small number of apostles, soon extended with St. Paul to the Gentiles, and thenceforward its progress was rapid. Philosophy was not indifferent to it. Plotinus of Alexandria, who has been named the Jewish Plato, and also the father of the fathers of the Church, desiring to reconcile the Greek philosophy with the new ideas, distinguished in God three things: the Father, the Mediating Word, and the Holy Ghost. A little later Philo, the chief of the Alexandrian school, conceived the same Trinity as follows: the Good, the Intelligence, the Soul, three degrees of the same God, one derived from the other and consequently unequal—the Trinity which Christianity adopted at the Council of Nice, but modified, despite the efforts of Arius, as follows: the Father, Creator *ex nihilo* by a bare act of his will, the Son, and the Holy Ghost, all three of equal degree and forming but one single God in three persons. The creation *ex nihilo* was a step backwards.

Christianity, in effect, instead of conquering the pagan world, was conquered by it, as Huxley has remarked. The fathers of the Church were overreached, the councils gave way before manifold influences, concessions were made to the barbarians, the primitive spirit swerved from its initial path. The Church, centralised in one of its patriarchs, became by degrees a terrestrial power having its needs, its ambitions, and its army of monks. It pretended to universal monarchy, had its political struggles, and ended in a despotic tyranny which lasted for ages until the schism of Luther—a breach made in behalf of the right to examine the holy Scriptures, and of which one of the ethnical effects was to separate the Northern blond races from the Southern, Celtic, and brown races.

During the Middle Ages science had disappeared from the

West. Philosophy, hemmed in between metaphysics and theology, became scholasticism, which sought to reconcile Plato, Plotinus, and Aristotle with the needs of orthodoxy, and split hairs over subtle essences and entities. In the first phase, faith and reason were confounded: "*credo ut intelligam*," said St. Anselm. In the second, reason was placed in the service of faith. In the third, the nominalists denied all harmony between the two. All this culminated in lassitude and scepticism. In was then that a concourse of circumstances occurred which, as fifteen centuries before, was to transform the Western world, although differently, and which inaugurated modern times, to-wit: the return to the West of the knowledge that had taken refuge among the Arabs, the discovery of printing, which spread everywhere trustworthy texts; the discovery of the new world which quadrupled the surface of the earth to be observed and studied; the awakening of science with Copernicus, Galileo, Kepler, Rondelet, Vesalius, Harvey,[1] and finally, the Reformation.

On the downfall of scholasticism, the first care of philosophy was not the renouncing of what had been its essence, the search for the absolute by intuition and reason, but the overhauling of its methods which it sought to render more precise. On the one hand, Descartes, the orthodox representative, defended the sovereignty of reason and the mathematical method by postulates, successive unbroken deductions, hypotheses, and intuition. On the other hand, Francis Bacon, who was inspired by Aristotle, contended that the book of nature was the true tome to be deciphered and commented upon; that "for the futile reasonings of dialectics, observation and experience were to be substituted; for deduction, which drew consequences, induction which established principles;" and that observation is particularly necessary for the facts which we inwardly observe in ourselves,

The subsequent divergencies were founded less in the varying intellectual and logical make-up of each philosopher and in their

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[1] P. Topinard. *Eléments d'anthropologie générale.* Chap. I., Paris, 1885. Edit.: Vigot frères.

method of applying their faculties than in their individual ways of feeling and conceiving. Philosophy in effect is simply a struggle between these elements. One is materialistic or idealistic, rationalistic or empirical, sees one's ideal in liberty, altruism, necessity, or something absolute, according to one's temperament. We have given endowments, variable endowments,[1] partly congenital, and partly acquired by the first impressions and the first readings of youth.[2]

Nevertheless, the conquests of science began to make themselves felt. The field of philosophy was narrowed; there was now less insistence on God and more on the world, man, morals, and the conditions of social life. The overhanging metaphysical cloud is more or less heavy, it sometimes nears the earth, and at spots suffers the light to pass through. There are two streams: the one, continues Descartes, in France with Pascal, Bossuet, Fénélon, and Malebranche, in Germany with Spinoza and Leibnitz; the other, in England, represented by Bacon, Hobbes, and Locke.[3] It is strange, but philosophers who are diametrically opposed to each other, who have started from different points and have conducted their reasonings differently, arrive when the figurative obscurities of their language are removed, at similar results—results which the freethinkers of to-day would not disavow.

Take Spinoza. He is a pantheist and proclaims the unity of substance and of perfect infinite being. Man is endowed with two natures, two different modes of this substance, the one spiritual, the other corporeal, in perfect pre-established harmony. Free will does not exist *a priori*, for everything is derived from the essence of God with absolute necessity; nor *a posteriori*, because our feeling of freedom is reducible to that of ignorance of the causes which determine us. Nature has no end and strives towards no goal; it

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[1] M. Topinard says: "On a telle ou telle grâce, une grâce variable," etc.—*Tr.*

[2] Leibnitz narrates that when scarcely fifteen years old he was debating whether he should champion Aristotle or Democritus.

[3] Alfred Fouillée. *Histoire de la Philosophie*. Paris, 1893. The same, *Extraits des Philosophes*. Paris, 1897. We have borrowed much from these two works, although not sharing all the views of their author.

is what it is, because it cannot be otherwise. Good and evil are merely ways of thinking; the useful is what affords us pleasure; morals are merely the science of utility, the science of happiness. To comprehend utility is all of the moral law and that which brings us near to God.

Another example is that of Kant, who in Germany marks the end of the eighteenth century. For him, God, the immortal soul, and personal liberty are moral necessities which we must admit if duty is to be justified. "The starry heaven above us, the moral law within us, are the only two things that call forth my admiration and respect," he writes. The only thing absolutely and immediately certain is duty. There are two sorts of commandments or imperatives, the one conditional and proceeding mainly from necessity, the other categorical, which is duty itself. To believe in liberty, without which the "ought" is impossible, is the first of all duties. There are in us two egos; one absolute, eternal, and unrelated to space and time; and the other sensuous, connected with our individuality and subject to determinism. The first is free, the second is not. Nature, such as science knows it, does not appear ruled by the moral law, but by laws which apparently are quite different from it. Ethics implies three postulates: (1) the possibility of harmony between morality and happiness, or the sovereign good; (2) the immortality of the soul; (3) the assumption that the sovereign good is the supreme end to which the universe tends and which the universe will reach. In brief, Kant reversed "the old metaphysics which was called the science of being or ontology and which thought itself the science of the absolute (Fouillée)," but he put in its place another which I shall call utilitarian metaphysics.

The other movement, in England, is particularly interesting for us. With Bacon, at the dawn of the revolution in that country,[1] it entered again on the path which had been opened twenty centuries previously by Socrates and Aristotle.

The end which laws should strive for, says Bacon, is simply

[1] The Novum Organum appeared in 1620. Charles I. ascended the throne in 1625.

that of rendering the citizens of a state happy. Private Right exists by the side of public Right; the study and the practice of law should be freed from pure empiricism as well as from all metaphysics.

Hobbes continues this thought. In practice as in theory, he says, necessity is our sole rule. Our sentiments are egoism transformed. To seek pleasure and avoid pain is the law of nature. The state of nature is war, the strongest wins: *homo homini lupus.* To put an end to this state, man forms societies, he renounces his individual rights, absolute over all things, on condition that others do likewise. This exchange of renunciations is a contract, that is to say, a reciprocal obligation equally binding upon all. But here Hobbes reaches a singular conclusion. In order to assure the execution of this contract, he proposes to lodge its absolute enforcement in the hands of a monarch who has unreserved power to take to task any one who seeks to avoid the compact but who is himself obligated in no wise. The contract of Hobbes is an abdication. The sovereign which Hobbes had in mind in his own time and in his own country was his friend Charles II.

Locke, fifty years after, resumed these ideas. The state of nature is neither the law of the strongest nor the inequality of men. Societies are established by the consent of all, that is to say, by a contract for protecting the natural rights of each, for dispatching external business with other societies, and for administering justice within. Man is permitted to alienate only that part of his rights and liberty which is strictly necessary for the maintenance of the association. He particularly reserves to himself that personal liberty which is the first of his rights, and his right to property acquired by work. The essential thing that he abandons is the right of personally administering justice. In constituting a legislative power and an executive power, he maintains his sovereignty and preserves his right to revolution if the contract is violated. Locke desired the separation of Church and State and tolerance for all religions.

Bacon, Hobbes, and Locke are the inaugurators of the English school, a school which is characterised by its practical spirit,

its observation and analysis of psychological facts, and by its disposition to refer the conduct of man to the advantages which he draws therefrom. It led to Adam Smith, who discovers the sanction of morality in altruism or public approbation; to Bentham, who sees it in interest rationally understood; to Hume and the Scottish school; and, finally, to the existing school of John Stuart Mill, Darwin, and Herbert Spencer.

Locke, on the other hand, is also the starting point of the French school of the eighteenth century, which is characterised by a tendency at once anti-clerical, altruistic, and sentimental. We have here Voltaire, Condillac, and the Encyclopædists; Helvétius, for whom "the whole art of legislation is to make it more advantageous for the individual to follow the law than to break it"; Montesquieu, who defined laws as "the necessary relations which are derived from the nature of things"; Rousseau and Condorcet. The Geneva philosopher best expresses that great love of humanity and that great need of individual liberty which was paramount at the dawn of the French Revolution. For him, the social problem was formulated thus: to find a form of association which protected and fostered with the whole power of the community the person and goods of each associated individual and by which each, though uniting with all, obeyed himself only and remained as free as before. Man in the state of nature was essentially gentle; he has been perverted by civilisation. Rousseau accepts the theory of a social contract as did Languet in 1577 and afterwards Hobbes, Locke, and Spinoza, but admits with Locke that certain natural rights, such as individual liberty, are inalienable.

We shall say nothing of the philosophy of the nineteenth century, of the German school which represents speculative philosophy, and of the English school which is physiological in bent, and of which we have the highest opinion. In France, the most notable achievement is the attempt which was made by August Comte.

For Comte metaphysics must be entirely eliminated. The day of intuitions, *a priori* conceptions, entities, innate ideas, is past. If a problem cannot be resolved, it is to be let alone. Psychology is

only a branch of physiology and the latter a division of biology. Morals rest not upon any imperative obligation but upon the altruism which education develops. There are no rights besides those which society confers. Human knowledge has passed through three stages: one of faith or theology, one of conceptions or metaphysics, and one of observation or science.

These, in sum, are the basal principles of science, and would be perfect if the positivist school were faithful to them. But in its own bosom even, there are refractory spirits who suffer themselves unconsciously to be ruled by their sentiments, rather than by observation, and who are constantly lapsing back into the old methods. For example, why should thinkers postulate a social organism similar to the animal organism, which is born, dies, etc.; or a mystical evolution which marches on inexorably towards a given end? Why have they systems of postulates and successive deductions, afterwards seeking the facts which agree with their preconceived opinions? Why have they characterisations or classifications of the sciences founded not on the objects observed but on the synthesis of the observations? The reason of it is that the majority of those whom positivism attracts are men of letters who have not been properly prepared for the search for the truth by practical preliminary studies in the physical and natural sciences. For me, there is but one method of knowing what is and of inducing therefrom what has been and what will be; all suggestions which transgress this method are void.

From this rapid examination of the evolution of philosophy we draw by way of *résumé* the following conclusions:

a. Philosophy, like religion, is the outcome of the belief in the supernatural held by man in his more or less primitive state.

b. The philosophic spirit and the spirit which created the arts and letters have as common characters their subjectivity, their need of imagining and of constructing, and their firm belief in the reality of their conceptions. Between the philosophical spirit and the mathematical spirit there is a further relation. We have mentioned the influence which mathematics exerted on the development of Greek philosophy and that influence persisted after the

Renaissance. Pythagoras and Leibnitz, to cite only two names, were as much mathematicians as philosophers. The first discovered the theorem of the square on the hypothenuse; the second invented the differential calculus. Descartes applied algebra to geometry. The connecting link between the two kinds of mind is the constant preoccupation with the logical order of things and the employment of the deductive method. On the other hand, between mathematicians and symphonic musicians we have also often observed a relation. Like these musicians, the mathematicians and philosophers are harmonists.

c. Philosophy is opposed to science. It answers to the impatient need of man to explain at once things which elude his comprehension.

d. Philosophy, when we clearly see its first expansion, is almost immediately at its culminating point, very likely because it was not yet bothered by science. Gradually it recognised that outside the facts there is nothing solid, but for a long time it could not tear itself from its illusions. At the present day it still lives, but is losing its initial character and sees itself obliged more and more to reckon with science and practice.

e. If with this waning evolution we compare that of the sciences, modest at the outset, slowly and laboriously advancing, but always with a sure and constant tread, and attaining to-day a height which is dazzling but which our grandchildren will regard as low in the extreme,—if we make this contrast, I say, we shall be obliged to say that the group of human faculties which has given birth to philosophy has a less prolonged future than that group which has given rise to science.

f. Philosophy, although on the wane, and apparently in disaccord with the end of the nineteenth century, has nevertheless a beautiful domain to exploit. Taking from it everything that belongs to the domain of facts and to the province of the *a posteriori*, there yet remains for it an important rôle upon which we shall touch later.

13. *The Altruistic Need.*—It remains to speak of the cerebral need which played an essential part in the formation of societies

and which enters into the principles that rule or should rule the societies which are derived therefrom.

Let us recapitulate what we have seen in animals. The first associations not induced by sexual instincts which occur between individuals or groups of individuals, were the result of indifferent circumstances. The habit came, then the pleasure, and finally an instinctive impulse to seek the company again. This may happen in animals of the same species or of different species which have no reason to fear each other, particularly among birds and herbivora. Collisions sometimes take place, but the pleasure of living together outweighs their drawbacks, and mutual concessions are made; the reciprocal need of altruism and of solidarity gains the upper hand. In short, the social instinct is quite remarkable and quite thoroughly consolidated in a large number of animals.

Man, who has sprung from social animals, has inherited this instinct or established need. In a state of nature, when the difficulties of life are simply of a refractory character, when there is room for all, where one has to struggle only with beasts and with nature, man's need of companionship as in the case of Robinson Crusoe before the advent of his man Friday, is the more imperious according as he has a highly developed faculty of exchanging ideas, a faculty which the animals lack, and according as these ideas are multiplied. In this stage, moreover, man has not yet learned to suppress himself. He is entirely spontaneous, he has not yet had experience of the necessity of looking beyond his acts.

At first his family almost entirely suffices to satisfy his need of company and the attendant needs of which we have already spoken. He is a good father, a good husband, and easy in manner, if we except certain savage and reflex habits. Later, when life is still not difficult, and when he lives in little bands, his conduct still remains natural. He yields to his first impulses, he does not analyse them, he has comrades whose company he enjoys in hunting and chatting, neighbors whom he treats as he wishes to be treated; he renders services without asking for anything in exchange; he spontaneously makes sacrifices for others as they do for him. In all things he behaves with frankness and does not know what it is to

lie. He is truly the child of nature. If he is struck he reacts, if he is offended he avenges himself. But without some reason and without being provoked to it, he never commits an injury but often does good. If he is a youth and makes a girl a mother he marries her. If one of the members of his family or one of his friends is attacked he springs to their defence, he identifies their cause with his own. Later, when the families become a clan, and the number of men likely to be found together has increased still more, a change sets in. The altruistic need or the desire for company finding wider scope, is displaced and extended far beyond the limits of the family. The individual prefers the pleasures of his companions to the joys of his own hearthstone; between him and them intercourse of friendship is established; a bond unconsciously unites them. If one is attacked by the members of another community, all rise in his defence.

In these different stages acts having appreciably the same motives are appreciably the same in all circumstances; the response to the same solicitation cannot vary much. All the members of a group or clan accustom themselves to regarding their empirical conduct as the best that can be followed. These acts being repeated become customs, of which all, that is to say public opinion, approve. To conform to that opinion is to act in the best manner. Not to conform to it is to oppose it, and, consequently, to deprive oneself of the approbation of that opinion to which one is sensitive.

The elders, the councils of these tribes, make these customs, which are consecrated by opinion, the basis of their judgments when called upon to settle differences. Tradition becomes the rule, and this receives the sanction of punishments. To obey the rule is good, to disobey it is bad. But if the elders assume the right to judge and punish, and if wrong-doers submit to their decisions, the reason is that the first take it for granted that the individual arraigned before them is responsible for his acts, and that the second are confident that they will be treated on a footing of equality before that tribunal.

In the state of nature man is restricted in his acts only by his

individual will, with or without thought as to their consequences. If he thinks he can kill an animal without being killed or wounded himself, he does so. If he thinks he is running too great a risk, he abstains from the deed. Towards his fellow-being he is not less free to act as he pleases, but more motives go to influence his conduct. One person is congenial to him, another is useful to him, renders him services, amuses him, loves him. Another is indifferent to him; but who knows whether on the morrow their rôles will not be changed, whether that other will then not be of use to him? Will the other not then behave as he himself has behaved? What will his family, what will public opinion say? People will censure him, will avoid him. The savage thus knows what he can and ought to do, and what restrictions he should impose upon his first impulses. The word rights, supposing he has any vague notion of anything of the kind, he would be incapable of understanding. He acts according to the circumstances; his conduct is restricted as regards his game; it is more so when in contact with one of his fellow-beings; it is still more so when in contact with several, and more so again when there are very many, as in societies.

It is the same with his obligations. By the very fact that the savage knows how to modify his conduct according to the circumstances and will consider that such and such acts must not be done, or that he must respect the personality of others, so that they in turn will respect his, that he makes concessions, etc., it is evident that the obligations which he assumes, are made by way of exchange. The whole matter is one of reciprocity. There is no understanding nor contract. Duty is but a word which we apply wrongly to animals; the one comprehends it no more than the other.

In short, among men more or less near the state of nature, acts are produced spontaneously as among animals; they are the best in the conditions given; they are not due to reasoning. The instinct to adapt acts to necessity is the whole thing. The ideas of good and of evil, of responsibility, justice, solidarity, rights and duties, liberty, have no effect upon conduct; they do not exist. The savage, abandoned to himself and untaught, acts empirically,

and his conduct is as correct as ours if not more so. His ethical notions conform to what his daily relations with his fellows demand; his acts are ruder, cruder, and more reflexive, but that is all.

It would be curious to know to what degree his internal sensibility enters into his acts, to what degree man yields to the blind impulse which leads him to long for the society of his fellows, what degree of pleasure he experiences in the sympathy he has for others, or that others have for him; whether he possesses in a developed degree the faculty of representing to himself the pleasure and pain of others, of feeling and sharing them; in a word, to what extent he is altruistic, whether in the first passive degree, which is benevolence, or in the second degree, which is charity (division of H. Spencer and others).

We have pointed out the qualities which savages generally exhibit in the state of nature. When we carefully read not memoirs but the long accounts of travellers and of missionaries who have lived in intimacy with them and have gained their confidence, there is no room for doubt. They are affectionate and devoted. It will be objected that their manners are brutal and that public opinion consecrates with them acts which we severely condemn. But are we ourselves so perfect, and are our manners, though refined, much superior? Witness what has just occurred in Armenia and what the courts daily reveal to us. Among certain savages, for example, public opinion approves of the man who has the courage to strangle a friend in agony in order to spare him useless suffering. Among others, sons abandon without food, or bury alive, their old and infirm fathers, who are incapable of following the nomadic band. But among these same savages, these same old men are listened to and respected, the sons know that their turn, too, will come, and they shed tears when in the last extremity they resolve upon their death. Moreover, facts of this character are rare, and are recounted by travellers because of their extraordinary nature. Savages surely do not understand morals as we do, but they have their morality nevertheless, and one which though different from ours has yet its value. They are straightforword, frank, loyal, and

not wicked. In altruism they are at the same stage as the average run of birds and of herbivorous mammals, and certainly at a degree higher than the generality of civilised races. The impulse which originally moved man to pass from the state of nature or purely family state to the social state was not interest but the need of being happy in the company of others, the need of exchanging ideas and sentiments.

We say originally, for as soon as the contact between men increased, as soon as the conditions of existence became difficult, the character of the scene changed and darkened. The struggle for existence, at first feeble, then gradually increasing in intensity, spreads and grows general among societies, classes, and individuals. To live in new conditions, every day more difficult, where fate has placed one, is ultimately the fortune of every one. Individualism augments, and conversely altruism diminishes. Men are constantly on their guard, weighing their acts. Experience renders them egoistic. To succeed, to rise, to dominate, to become rich, are the ruling passions. The more intelligent a man is, the less in general is his compassion, the more deaf he is to the cries of victims. Here and there a few altruists come to the surface, but they are the dupes. We recall again the saying of Hobbes: *homo homini lupus.*

True, this situation is not entirely due to civilisation. Nature is for the most part, if not entirely, responsible for it. It has made men signally unequal—some crippled, sick, and incapable of the least intellectual effort, others strong, healthy, and intelligent; some envious, hateful, wicked, and truculent, others gentle, loving, and devoted; some predestined from birth to premature death or a long life of suffering; others predestined to success and happiness. Animals have muscles, claws, and teeth, and use them when they are hungry. Man has but one weapon, but more poignant, venomous, and deadly—his intelligence—and he uses it even when he is not hungry to satisfy other needs multiplied a hundred fold by that intelligence. Animals of the same species rarely fight; men rend and devour each other.

Very early, long before Darwin, away back in the dim past, these facts had struck the attention of thoughtful men. In the

councils even of tribes not far advanced, when regulating punishments for deeds considered evil, the effort was made to forestall, soften, and correct them in the interests of the general weal. But as the particular interest of a sect or a monarch gained the upper hand, these efforts decreased; the cause of the feeble, the unfortunate, and the enslaved had none but secret defenders among *élite* men who were more sensitive to their suffering than those about them. At times these defenders were unknown legislators, as in Egypt where we find a few humanitarian laws inspired by lofty ideas of equality; at times they were members of the sacerdotal class who sought to offer consolation to the victims of nature and civilisation, to give them the hopes of posthumous compensation, as in India where the preachers of Buddha said: "Life is but a chain of evils, resign yourselves, conduct yourselves well, your recompense is Nirvâna."

Greek philosophy occupied itself little with the miseries of the classes who were really miserable. Its glance was directed higher; it imagined an ideal of happiness for the sages, an organisation useful for the state, and abided by these propositions. The words "justice," "good," and "evil" bristle in their discussion but in a different sense from that which we give to them nowadays and with reference to the order of nature, of which they see the excellences and not the faults. Aristotle distinguished justice of exchange and justice of distribution, but without insisting upon those unwritten laws which Socrates said were inscribed in the human heart. The Stoics and the Epicureans, as we have said, achieved nothing but the consecration of egoism. Some few legislators of antiquity, like Solon and Numa, appear to have been inspired a little with the moral idea as contrasted with the utilitarian idea which was everywhere predominant.

It was really not until the rise of Christianity that we see the establishment and spread of generous and altruistic ideas having in view not a single class of citizens but the pariahs of society who are so much in need of support and without distinction of class or nationality but bearing upon humanity at large. These were the ideas of love in its universal sense, of fraternity, equality, compas-

sion, charity, and disinterestedness; the distinction of moral good and evil, of private and public conduct, the notion of one's duty towards oneself and towards others. Nevertheless the progress was only superficial. Although legislators strove to inspire themselves with the new principles, their acts did not correspond to them. The masses of the population suffered as much as ever. The struggle was just as implacable, altruism was as sparsely sown as ever.

But after the Renaissance, the ideas which we briefly recapitulated in our review of the history of philosophy, steadily gained headway. The latent principles which should govern the organisation of society were discussed. The notion hitherto so vague, of rights, of individual liberty, unrestricted or curtailed by the social state, gradually assumed shape and solidity. The sentiments of reciprocal duty, solidarity, and responsibility were extended, the double declaration of the natural rights of man in 1776 in the United States and in 1790 in France, opened up a new era—the era of natural rights, that is of those which society cannot abrogate and which involve the correlative duty of respect for those rights in others.

This brings us to the present time at which more than ever the following questions dominate the whole of practical sociology.

On the one hand scientific facts show that nature in placing man at the acme of creation, and in having given him his intellect as his weapon of existence, has at the same time and in the same degree as the other animals, condemned him to an incessant struggle for the satisfaction of his needs, which are even multiplied by that intelligence. At the start that struggle was with individuals of other species, as it is among animals. At present it is carried on in the bosom of the species of itself between man and man, congenitally unequal and not responsible for that inequality. It engenders suffering, misery, and ruin, and divides humanity into oppressors and oppressed, conquerors and conquered.

On the other hand, all that is good in the human heart, love, compassion, generosity, regard for human dignity as a higher animal species, is aroused and protests energetically against this state

of things. It demands that fraternity shall not be an empty word written on the front of our edifices, that justice and peace shall reign, that each shall be recompensed for his efforts, and have his legitimate share in the general happiness, that solidarity shall be a reality.

On the one side egotism is arrayed, the principal factor in the struggle; on the other altruism, the principal factor of concord.

On the one side is the individual, always more or less an animal, knowing only his present life and desiring it to be the best possible. On the other is society, an impersonal and permanent being in which are resumed the experience of the past, the hopes of the future, and the happiness of the present, distributed equitably for the best, among all.

Is the reconciliation of these opposed factors possible? Are we to conclude, as we did in 1893, that science and practice are contradictory, that we cannot guide ourselves in rigorous conformity to truth? Must we admit social dogmas?

What lesson does our knowledge of social evolution up to the present day convey? In which phase of it are we now involved? Which new adaptations are the best? Towards what point on the horizon is our bark turned? Towards what shores will the wind waft us?

This is the subject which we shall examine in our last article which will bear the title "The Social Problem."

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